AMENDED CLAIMS

[(received by the International Bureau on 05 October 2004 (05.10.04); original claim 3 amended; remaining claims unchanged (1 page)]

1. An improved process for the preparation of fatty acid alkyl esters suitable for use as biodiesel, said process comprises the steps of,
    a. reacting fatty acid glycerides with an alcohol having 1-4 carbon atoms in the molar ratio of 3:1 to 30:1 of fatty acids and triglycerides respectively, at a temperature ranging between 70-300°C, pressure in the range of 1-30 bar, in presence of a organometalic catalytic compound of Tin with concentration of catalyst is in the range of 0.01 to 3 weight percent of the fatty acid glycerides;
    b. obtaining ester with glycerol;
    c. separating the glycerine from the fatty acid alkyl ester as immiscible phase by decantation;
    d. purifying the fatty acid alkyl esters by washing with water, and
    e. washed ester is treated with an basic adsorbent to obtain biodiesel.
2. A process as claimed in claim 1, wherein fatty acid glycerides are selected from the group consisting of vegetable oil, animal oil, fatty acids and mixture thereof.
3. A process as claimed in claim 1, wherein the adsorbent is selected from the group consisting of bauxite, alumina, silica-alumina and distillation or combinations thereof.
4. A process as claimed in claim 1, wherein the catalyst is alkyl Tin oxide.
5. A process as claimed in claim 1, wherein the preferred temperature of the reaction is in the range of 150-200 °C
5. A process as claim 1, wherein the treatment with adsorbent is carried out at 20-60°C.
6. A process as claimed in claims 1, wherein the excess alcohol is recovered and recycled.
7. A process as claimed in claim 1, wherein the biodiesel obtained has an acid value in the range of 0.01-0.50 mg KOH/g.
8. A process as claimed in claims 1, wherein the biodiesel obtained has viscosity in the range of 4-7 cSt at 40 °C.
9. A process as claimed in claims 1, wherein the fatty acid alkyl esters produced are suitable for use as fuel in diesel engines, blending component for petrodiesel and as additive in petrofuel for enhancing lubricity, cetane number and biodegradability.